

THE CANONS CE PRIMARY SCHOOL



Computing Policy

Reviewed 2024

Intent

We strive to deliver a high quality Computing Curriculum which allows our pupils to recognise the significance of technology in an increasingly technological world. The National Curriculum is at the core of our Computing Curriculum which is taught as a discrete subject that has equal status with other foundation subjects. We also encourage staff to teach, develop and reinforce computing knowledge and skills throughout broader programmes of study where suitable.

The aim of our well-structured and progressive Computing Curriculum is to equip our children with the skills and knowledge necessary to: become digitally literate (to make good decisions about how to use technology and can approach new devices and software with a degree of familiarity and confidence); think innovatively, logically and use computational thinking; and to be creators, not just consumers. In order to achieve this, we believe it is important for children to acquire the skills and knowledge of computing progressively whilst supporting them to 'know more, remember more and apply more'. We do this by allowing children the opportunity to practice and refine skills and build new knowledge on prior knowledge.

By modelling and educating our pupils on how to use technology positively, we aim for our pupils to leave our school as conscientious, well-rounded digital citizens who use technology responsibly, confidently, wisely and positively in the public sphere.

Implementation

Learning Ladders Objectives

The Canons CE Primary have devised their own Learning ladders for Computing, which break down the general KS1 and KS2 National Curriculum (NC) statements into specific objectives that each year group needs to cover in Computing. These objectives cover 3 strands of Computing: Computer Science (CS), Information Technology (IT) and Digital Literacy (DL) – and allow for progression within Computing from Year 1 to Year 6. The impact of this is that by the end of Year 6, children will have covered all requirements as stated by the NC progressively, building upon previous knowledge and being introduced to new learning.

Curriculum

All of the Computer Science and Information Technology objectives are taught in discrete Computing lessons through various units. Most of these units are based on the Purple Mash units of work (with additional guidance being given by Computing Co-Ordinators as to where lessons may need to be adapted to ensure the Learning Ladders objectives are met fully). Some units have been planned specifically for The Canons by the Computing Co-ordinators to ensure objectives that would otherwise not be covered through Purple Mash units, are taught. Lessons from Teach Computing are also used to supplement the curriculum where relevant to ensure all Computing objectives have the opportunity to be met.

The Digital Literacy objectives incorporate objectives as specified in the 'Education for a Connected World 2020 Edition' and are explicitly taught through the Project Evolve Scheme of work. This is a comprehensive scheme of work created by experts in the field, with a range of excellent lessons designed to address all key areas of concern regarding children's safe use of the Internet. At least one lesson from each of the digital literacy objectives (that focuses on online safety) is taught through Project Evolve, ensuring each of the 8 strands in the Education for a Connected World are covered. These digital literacy objectives are revisited and knowledge reinforced through the computing curriculum in computing lessons, and other event days such as Internet Safety Day and Anti-bullying Week.

Curriculum Planning

In order to ensure the Computing Curriculum supports a sequence of lessons where knowledge and skills are acquired, practised and progressively built upon, the planning is carried out in three phases: long term, medium term and short term.

Long Term

The long term plan maps the units studied during each year group alongside NC objectives and the computing skills/knowledge (Ladders Objective) that the children will develop. Where staff may need to amend the lesson to meet the objective fully, this is also indicated.

The yearly overview for computing in each year group maps the order that the units are completed over the year, ensuring that it supports progression in learning.

Medium Term

The medium term plans give an overview of what children will be learning in each unit. It specifies prior knowledge that children will be building upon and new knowledge that children will gain. The Ladders Objectives that are covered in the unit are indicated and for each lesson, a suggested Learning Intention, Success Criteria and where appropriate, a list of key questions to be asked (linked to the learning ladders objectives) are detailed.

Short Term

The short term plans provide teachers with weekly lesson plans, which can be tailored by the class teacher to suit the needs and abilities of the children in their class.

These plans detail:

- teacher modelling and input;
- correct use of computing terminology;
- independent activities that children could be set;
- resources that may be needed.

In addition, each unit of Computing has a corresponding knowledge organiser. Key vocabulary, images, questions and answers and subject specific information/knowledge for the unit are displayed on the knowledge organisers.

EYFS

Pupils in the Foundation Stage are given a play-based experience of Computing. They are given the opportunity to explore the uses of different technology through role-play, and have access to Beebots. The exploration of these resources during the Foundation Stage develops an understanding of where technology may be found and how it may be controlled.

Sequencing of key events (such as from a story or to plant a bean), using terminology associated with sequencing and following sequenced instructions also provides pupils with the opportunity to develop their algorithmic thinking. Through the use of the Interactive Whiteboard, pupils experience using technology to support learning in other areas of the curriculum, and Pupils are given the opportunity to take photos with an iPad. Through the Project Evolve Scheme of work and participation of events such as Anti-Bullying Week and Internet Safety Day, pupils in the foundation stage begin to understand how to keep themselves safe online.

Work Outcomes

In KS1, outcomes that are produced by children on the desktop computers are saved either on the school server or in pupils' individual Purple Mash accounts. For work created on the iPads, children can upload work onto their Seesaw account (provided the App that has been used by the pupils is compatible with Seesaw). Seesaw also allows for pupils to take photos of any other work (in any curriculum area) and save videos of themselves too.

In KS2, pupils' outcomes are saved either in pupils' individual Purple Mash accounts, or in their Seesaw accounts under the relevant lesson.

Digital Literacy objectives that cover Internet safety explicitly taught using the Project Evolve Scheme of work are evidenced on Seesaw in KS2 and in an Internet Safety folder in KS1.

In KS2, books are used on a discretionary basis, and they may be used for notes, ideas, designs or plans during lessons. Any work completed in books similar to this is photographed and uploaded to Seesaw, our central evidence base.

Professional development

There is provision within the school to support and provide training for all staff members as appropriate. This may take the form of external/online courses, CPD sessions and/or individual guidance. In addition, teaching staff are encouraged to support each other, drawing upon personal knowledge and experience. Staff are also expected to reflect on their own practice and share their experiences. Staff are regularly made aware of new developments in software and hardware, and how they can use these in the wider curriculum.

Currently, teachers support and observe the Computing Co-ordinators to deliver Computing lessons in order to further their understanding of how to successfully deliver the Computing curriculum. Requests made by teachers as to the support needed in terms of professional development in Computing is acted upon by Computing Co-Ordinators and teachers are invited to assess and deliver teaching alongside the Co-Ordinators.

(Note: Lessons from the Project Evolve Scheme of work, which covers Internet Safety is taught by class teachers rather than the Computing co-ordinators, due to the subject's strong links with PSHE and the crucial importance of teachers having a strong degree of familiarity and awareness of these issues, from a safeguarding perspective.)

Teachers are required to complete a yearly course in online safety to ensure their understanding is updated regularly and is kept in line with any new guidance.

Use of technology in other subject areas

In addition to the Computing curriculum, teachers are encouraged to use technology to support teaching and learning in other curriculum areas. In EYFS/KS1, the Computing Room can be booked Mon-Wed. In KS2, iPads are available and the Computing Room can be booked Thurs-Fri.

Equal Opportunities and Inclusion

All pupils are provided with equal access to the Computing Curriculum and we aim to provide suitable learning opportunities regardless of gender, ethnicity, disability or home background. Where necessary, work is adapted by task, resource or support to ensure the individual needs of More Able and SEN pupils are met, and the services and advice of the special needs team are called upon where appropriate. We intend as far as possible to provide a variety of teaching and learning styles, taking into account the needs of the children and their starting points.

Social, Moral, Spiritual and Cultural

Computing contributes to our school's SMSC development through:

- Preparing the children for the challenges of living and learning in a technologically enriched, increasingly interconnected world;
- Making clear how we keep ourselves and others safe when using The Internet, and discussing the moral and social implications that could be experienced when using technology (such as cyber-bullying)
- Evaluating and reflecting on the use of technology, discussing its potential and limitations, relating this to personal experience when using technology
- Acknowledging advances in technology and appreciation for human achievement.

Resource availability, access, safety and maintenance

A range of resources are available which successfully supports delivering the Computing curriculum and enables all learners to reach their full potential. Resources are suitable, maintained and replenished when needed, which is overseen by the Computing Co-Ordinators and the technician.

Impact

Assessment

Work produced in computing lessons is regularly monitored and commented upon in line with national expectations of attainment. This is supported with the use of the 'Assessment Guidance' documents that are provided for relevant Purple Mash units of work.

On a termly basis, teachers/Co-ordinators provide a 'teacher judgement' assessment which considers all assessments and observations of pupils in Computing as a whole subject based on the ladders objectives. This teacher judgement involves a judgement based on pupil attainment and another separately on pupil progress.

Progress is grouped into having made:

- Well-Below Age Related Progress,
- Below Age-Related Progress,
- Expected Age-Related Progress
- Above Age-Related Progress.

Attainment is grouped into working:

- Below Age-Related Expectations,
- Working Towards Age-Related Expectations,
- Working At Age-Related Expectations,
- Exceeding Age-Related Expectations.

To support with assessment in KS1, children collectively complete a KWL grid for each unit. This is started at the beginning of the unit to elicit prior knowledge, and at the end of the unit to evidence knowledge gained. These KWL grids help to form assessment judgments in addition to monitoring the knowledge that is retained by pupils as a result of the computing lessons that are being taught. In KS2, children take an annual assessment of their knowledge of coding vocabulary which they improve upon each year. During lesson time, the class teacher and the Computing Co-ordinator work in tandem to assess each class against the lesson's success criteria, which is cross referenced with the Purple Mash assessment guidance and our learning ladders curriculum objectives, in order to build up a clear picture of each child's skills and capabilities.

Internet Safety Assessment

Questions from the Knowledge Maps on the Project Evolve Website are used to assess children's understanding in each of the 8 strands of Digital Literacy Objectives. These assessments are carried out by Computing Co-ordinators once the relevant lessons from the Project Evolve scheme of work have been taught by class teachers. These assessments consist of questions for which pupils must choose the best answer. Misconceptions are addressed by teachers/Computing Co-ordinators and if needed, lessons are revisited using the resources provided by Project Evolve.

Monitoring

All teachers are responsible for monitoring standards of work produced in Computing, but the Computing Co-Ordinators take a lead in this. They also monitor outcomes of internet safety lessons/discussions and the effectiveness of teaching and learning. This may involve:

Teacher questionnaires

- Used for teachers to reflect upon the teaching and learning of computing and to identify any areas for improvement/professional development

(As Co-Ordinators currently deliver Computing lessons to support teachers with their professional development, teacher questionnaires at the beginning of the academic year are used to identify starting points for professional development. Subsequent questionnaires allow teachers to share thoughts on whether these areas have been resolved/ identify new areas that need addressing)

Teacher observations

- SLT carry out formal lesson observations of computing lessons and of the Computing Co-ordinators, sharing feedback of strengths and areas of improvement in line with Performance Management targets
- Class teachers share their thoughts on the strengths and areas of improvement of computing lessons that they have observed through the teacher questionnaires
- Computing Co-Ordinators observe each other teaching and share feedback for strengths and areas of improvement in an informal manner

Pupil Voice

- Used to elicit pupils' thoughts about computing lessons such as about the content they are learning; knowledge that they are able to recall and understand; links they feel they have made with prior knowledge from previous years; what pupils are finding difficult; what suggestions for improvement they would like to see next.

Work trawls

- Scheduled termly checks to ensure that Internet Safety lessons (following the Project Evolve scheme of work) have taken place and that work is of the required

standard. Assessment questions at the end of the relevant lessons asked to pupils and feedback shared

- Scheduled termly checks that pupils' computing work is being monitored, commented upon and assessed in line with national expectations by staff
- Monitoring and comparison of work within year groups, key stages and across key stages to identify the success to which the computing intent is being met (whether it shows that pupils are becoming digitally literate; whether progression can be seen; whether learning is durable and learning applied more)

Data

- Scheduled termly checks that teacher judgements for computing are being completed in line with national expectations for computing
- Yearly analysis of data, looking for any trends amongst boys/girls, PP, SEN and taking action as necessary to minimise gaps

Monitoring and reviewing policy.

It is intended that the policy should be monitored informally and that it should be reviewed yearly, or due to the development of new technologies or in light of any Online Safety incidents.